

Prior to discussing the claim rejections, applicant takes this opportunity to set forth the following brief remarks in connection with the invention. Several of these points were discussed with Examiner Nolan at the personal interview of March 3, 1999 referred to in the Amendment filed on March 31, 1999 and/or were discussed in that Amendment. However, in view of the proposal to cancel claims 10-12 and pursue the preferred embodiment as defined in proposed twice amended claim 9, applicant considers that these remarks may be helpful to the Examiner.

The preferred embodiment of the liner claimed in claim 9 is as illustrated in Fig. 7. Here, a lining tube 14 of flexible resin absorbable material is bonded to a collar 100 shown having a substantial planar surface facing the lining tube. The lining tube is dimensioned to fit within and urged against the inner wall of the lateral pipeline to be lined and the collar is designed to be urged against the inner wall of the main pipeline. This configuration enables the formation of an effective seal at the intersection between the lateral and main pipeline. As discussed at page 7 of the specification, collar 100 is formed of similar material as lining tube 14. Thus, both elements of the liner are fully flexible and are able to conform to the unique shape and configuration of the intersection. The two elements will then cure at substantially the same rate with the lining tube urged against the interior of the lateral and the upper planar surface of collar 100 urged against the interior of the main pipeline. This is emphasized in proposed amended claim 9 by the description of collar 100 as having a planar surface facing lining tube 14. Support for this proposed language is at page 7, lines 25-31 of the specification and Fig. 7 which shows a flat collar extending substantially beyond the

lumen of the lining tube. The description recites that the collar cures so that it remains in place around the lateral opening.

A particularly useful feature of the liner of Fig. 7 as now claimed more clearly is that it can be installed into the lateral from the main line out. This lining operation can be done by an apparatus of the type illustrated in Fig. 1, or preferably the type as shown in Figs. 5 and 6. This is in marked contrast to the lateral liner with retainer ring of Long et al. which is designed to be pushed into the lateral towards the main pipeline. The desirability of the liner of Fig. 7 is that it forms an effective seal at the lateral/mainline intersection due to the flexibility and conformability of collar 100. As those skilled in the art of lining existing pipelines, particularly sanitary in-ground sewers, are well aware, in practice the intersection between lateral pipelines and main pipelines do not conform to close tolerances. Not only are there variances in dimensions, but also differences in shape. Moreover, the deterioration of the existing conduit often occurs at the intersection. This means that having a truly flexible and fully conformable liner to line the lateral and seal the intersection is highly desirable. This enables the liner to cure with the lining tube urged against the interior of the lateral and the collar urged against the interior of the main line at the intersection for forming an effective seal.

Turning to the Office Action, the Examiner rejected claim 12 under Section 112. The Examiner considered that certain phrases were not supported by the specification and were indefinite. In view of the proposed cancellation of claim 12, it is respectfully submitted that upon entry of this amendment, this rejection would be rendered moot and should be withdrawn.

This leaves the rejection of claims 9-12 under 35 U.S.C. §103(a) as unpatentable over Long et al. (U.S. Patent No. 5,108,533). Here, the Examiner refers to paragraphs 4-7 of the previous Office Action. In paragraph 4 the Examiner rejected claim 9 under 35 U.S.C. §102(b), while in paragraph 7 the Examiner rejected only claims 10-11 under §103. In view of the cancellation of claims 10-11, applicant will address the remarks in paragraph 4 as if it sets forth a rejection under Section 103, not Section 102 in view of the acknowledgement by the Examiner in the present Office Action that the rejection is under Section 103(a). In the previous Action, the Examiner noted that Long et al. taught a flexible tubular member and a flexible retainer secured thereto which is ultimately positioned within the main pipe approximate the service pipe terminal end.

The rejection of claim 9 under Section 103 is respectfully traversed for the following reasons.

As noted above, applicant's preferred embodiment illustrated in Fig. 7 includes collar 100 which has a substantially planar surface facing lining tube 14 to be urged against the interior surface of main pipeline. This is marked contrast to Long et al. who merely show in Fig. 6 and 7 a flexible retainer at the end of the tubular portion of the liner. As discussed with the Examiner, this retainer ring is deformed for insertion of the lining into the lateral and returns to its original manufactured form once the retainer reaches the main pipeline. The retainer is just that - - a retainer ring for preventing the leading end of the tube from moving into the service pipe as noted at column 6, lines 30-32. It is not a seal and is not designed to be cured against the interior surface of the main pipeline as now set forth affirmatively in claim 9. There is simply no teaching or suggestion in Long et al. to provide

a collar with a planar surface in the form illustrated in Fig. 7 and affirmatively set forth in twice amended claim 9.

What is significant here is that flexible retainer 46 of Long et al. is designed to return to its manufactured form when inserted. As a practical matter due to the variances in size and angle of the intersection of the lateral and main pipeline discussed above, once the flexible retainer returns to its manufactured shape, the Long et al. tubular member does not have the flexibility to conform closely to the junction of the lateral and main pipeline as does applicant's tubular lining with flexible collar as claimed. Nor does Long et al. have a collar similar to element 100 with a planar surface to be urged against the interior wall of the main pipeline. The conformability of applicant's liner readily accommodates to the wide variance between individual lateral and main line intersection. Long et al. requires a resilient retainer ring which will return to an original manufactured form in view of the fact that it is not inserted into the lateral from the main line out utilizing a bladder. While a bladder may be used for ultimately urging the lining tube against the interior of the lateral in Long et al., the bladder is not utilized during insertion to urge applicant's planar collar 100 against the interior of the main pipeline adjacent the lateral opening.

For these reasons, applicant respectfully submits that twice amended claim 9 is clearly patentable over Long et al. and is in condition for immediate allowance. Thus, the rejection over Long et al. under Section 103(a) should be withdrawn.

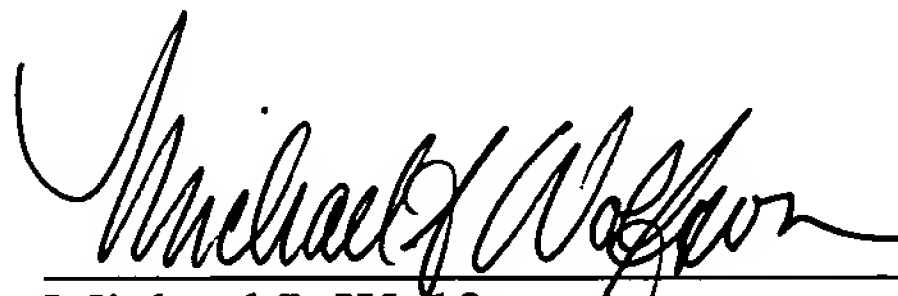
In view of the amendment proposed herewith and the above remarks, the Examiner is respectfully requested to reconsider the application at an early date with a view towards entering the amendment to claim 9 and canceling claims 10-12. Entry of such an amendment

should place the application in condition for immediate allowance. In the absence of the Examiner's concurrence, the Examiner is respectfully requested to enter the amendment proposed herewith in an effort to place the application in better condition for appeal. This latter action would simplify issues on appeal as presenting a single claim directed to the preferred embodiment of Fig. 7 to be appealed.

If upon review of the application and this amendment, the Examiner is unable to issue an immediate Notice of Allowance or if not inclined to enter the proposed amendment, the Examiner is respectfully requested to telephone the undersigned attorney with a view towards resolving the outstanding issues.

Early and favorable action is earnestly solicited.

Respectfully submitted,



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